

River des Peres
Whole Body Contact Recreation
Use Attainability Analysis

July 2005

Prepared for:
METROPOLITAN ST. LOUIS SEWER DISTRICT
2350 Market Street
St. Louis, Missouri 63103

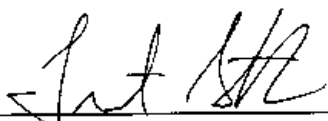
Prepared by:
MEC WATER RESOURCES, INC.
1000 North College Avenue, Suite 4
Columbia, Missouri 65201

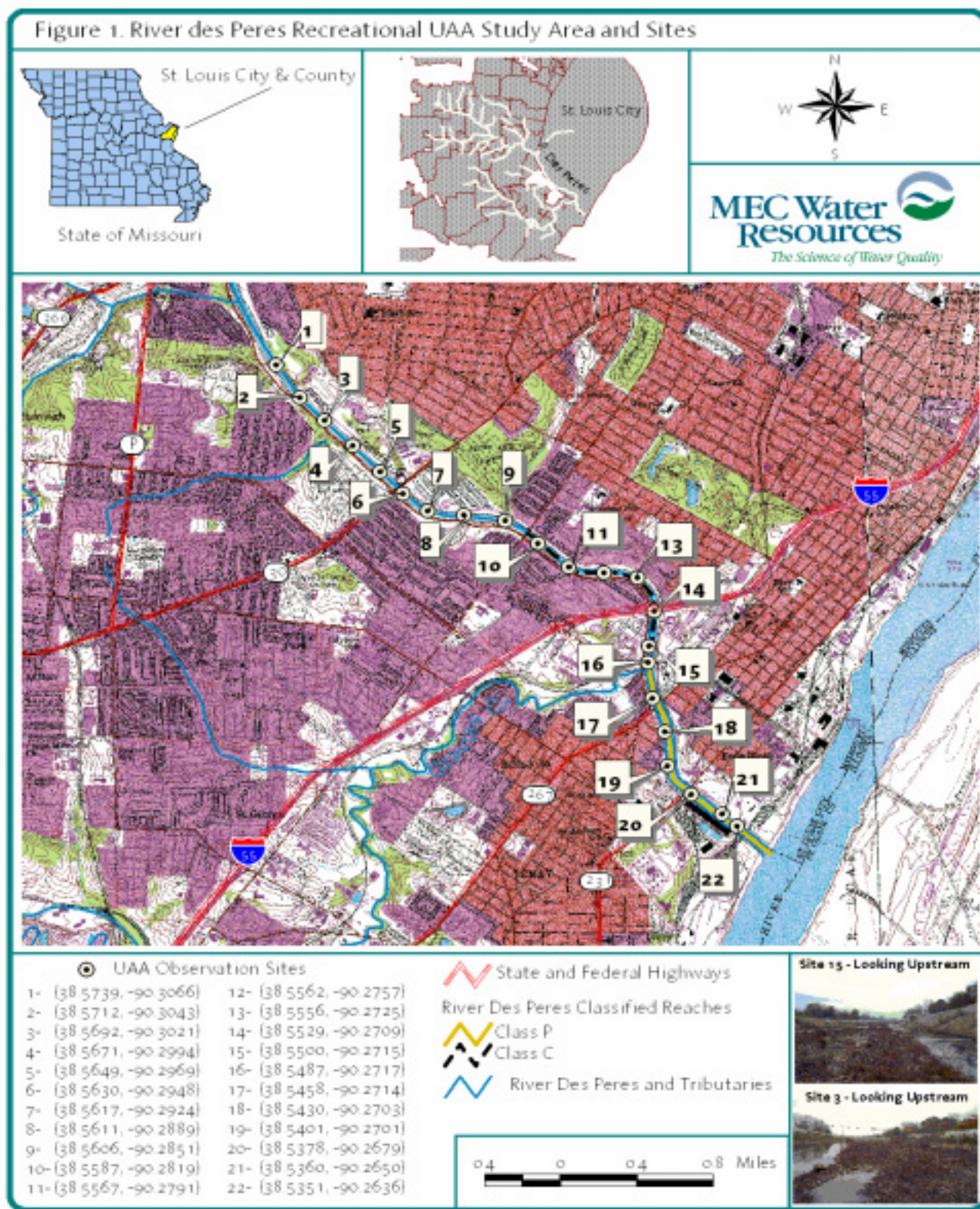
Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A – Water Body Identification

Water Body Name: River Des Peres (from USGS 7.5' quad)
8-digit HUC: 07140101
Missouri WBID # 1710 & 1711
County: St. Louis City
Upstream Legal Description: N/A French Survey
Downstream Legal Description: N/A French Survey
Upstream Coordinates: 38.57394, -90.30666 (USG 84, dd,ddd)
Downstream Coordinates: 38.53492, -90.26352 (USG 84, dd,ddd)
Discharger Facility Name(s): N/A
Discharger Permit Number(s): N/A
Number of Sites Evaluated: Twenty-two (22)
Name of Surveyor and Telephone Number: Trent Stober (573) 443-4100
Organization: MEC Water Resources, Inc.
Position: Senior Project Manager

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed:  Date: 7/7/05



Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <i>unclassified</i>	Site Location Description:	
Site Lat/Long: <i>0734647 / 4272901 (utm)</i>	<i>T-1 River des Pins</i>	
Date & Time: <i>10/26/04 1030</i>	Facility Name:	
Personnel: <i>RN/WM</i>	Permit Number:	
Current Weather Conditions: <i>overcast</i>	Weather Conditions for Past 7 days: <i>overcast</i>	
Photo Ids: Upstream: <i>1-3</i>	Downstream: <i>4</i>	Other:

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input checked="" type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <i>Discharge pipes</i>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	28'	Length(ft)	1500'	Ave. Depth(ft)	0.4'	Max. Depth(ft)	0.8'
<input checked="" type="checkbox"/> Run	Width(ft)	48'	Length(ft)	1500'	Ave. Depth(ft)	1.5'	Max. Depth(ft)	1.7'
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes	No		Estimated (ft ³ /sec):	0.5		

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	28'	Length(ft)	1800'	Ave. Depth(ft)	0.4'	Max. Depth(ft)	0.7'
<input checked="" type="checkbox"/> Run	Width(ft)	48'	Length(ft)	1800'	Ave. Depth(ft)	1.5'	Max. Depth(ft)	1.7'
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="checkbox"/> Yes	No		Estimated (ft ³ /sec):	0.5		

Substrate*: (These values should add up to 100%)

<input checked="" type="checkbox"/> %Cobble	30	%Gravel	60	%Sand	—	%Silt	2	%Mud/Clay	—	%Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<i>Filamentous algae on rocky substrate along outside of riffle/run/pool.</i>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input checked="" type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Munt Date: 10/20/24

Organization: MCC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #1. Upstream View



Site #1. Downstream View



Site #2. Upstream View



Site #2. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: 1150 River de los rios

Date/Time: 12/20/04 10:30

Site/Transect ID Number: 1 - 0734647/4272000 (1000)

Start Time: 10:30

End Time: 11:00

Measured by: RM/NN

Air Temp: 20°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: 20°

RDB Angle: 10° 15°

Secchi (ft) —

Turbidity (NTU): 5.53

Channel Comp (%):

Cobble 9

Gravel 30

Sand 60

Silt —

Other 2% mud

Bank Composition —

Riparian Corridor Density: —

Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

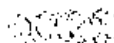
Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —



[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>unclassified</u>	Site Location Description:
Site Lat/Long: <u>#156 0734848/4272631</u>	<u>T-2 River des Peres</u>
Date & Time: <u>10/20/04 1130</u>	Facility Name:
Personnel: <u>RM/nm</u>	Permit Number:
Current Weather Conditions: <u>overcast</u>	Weather Conditions for Past 7 days: <u>overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 5-8</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input checked="" type="checkbox"/> Stairs/ <u>walkway</u>
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	28.0	Length(ft)	50	Ave. Depth(ft)	0.2	Max. Depth(ft)	0.5
<input checked="" type="checkbox"/> Run	Width(ft)	31.5	Length(ft)	150	Ave. Depth(ft)	0.75	Max. Depth(ft)	1.1
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	<u>Yes</u>	No		Estimated (ft ³ /sec):	0.8		

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	28'	Length(ft)	500	Ave. Depth(ft)	0.8	Max. Depth(ft)	1.0
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):	0.5		

Substrate*: (These values should add up to 100%)

10 %Cobble	20 %Gravel	50 %Sand	— %Silt	— %Mud/Clay	20 %Bedrock	RM Concrete
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Filamentous algae on substrate located on edge of water.

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Paul Hunt Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD - River des Pains

Date/Time: 11/30/2014

Site/Transect ID Number: 2 1st

Start Time: 1130

End Time: 1150

Measured by: RP: J

Air Temp: 18°C

Weather Cond: Clear

Stream Morphology Between Transects

#	Length of Pools			Length of Run			Length of Riffles		
	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
RDP: 1	500			150			200		
2	150						250		
3							50		
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: 30°

RDB Angle:

Secchi (ft):

Turbidity (NTU):

Channel Comp (%):

Cobble

10%

Gravel

20%

Sand

70%

Silt

Other

Woods

Bank Composition

Flat rip rap: little gravel

Riparian Corridor Density:

Width of Riparian Area:

Composition of Riparian Vegetation:

General Observations:

Stream Discharge Measurements

Beginning Stage

Ending Stage:

Total Q:

Channel Width:

Total Area:

Average Velocity:

Distance from Datum to Water Surface:

Start:

End:

Meas. type:

Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>Unclassified</u>	Site Location Description:
Site Lat/Long: <u>#157(0132003/4272422)</u>	<u>T-3 River des Peres</u>
Date & Time: <u>10/20/04 1200</u>	Facility Name:
Personnel: <u>RM/NM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 9-12</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Dozer Tracks, Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	23	Length(ft)	20'	Ave. Depth(ft)	0.5	Max. Depth(ft)	0.65
<input checked="" type="checkbox"/> Run	Width(ft)	31.5'	Length(ft)	400'	Ave. Depth(ft)	0.65	Max. Depth(ft)	0.8
<input checked="" type="checkbox"/> Pool	Width(ft)	25'	Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	0.58
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No	Estimated (ft ³ /sec):	0.3			

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	31.5	Length(ft)	500'	Ave. Depth(ft)	0.5	Max. Depth(ft)	0.7
<input checked="" type="checkbox"/> Pool	Width(ft)	25	Length(ft)	75'	Ave. Depth(ft)	0.45	Max. Depth(ft)	0.6
<input type="checkbox"/> Flow	Present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	Estimated (ft ³ /sec):	0.4			

Substrate*: (These values should add up to 100%)

10 %Cobble	20 %Gravel	30 %Sand	— %Silt	— %Mud/Clay	40 %Bedrock ^{pm} concrete
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Small mats of filamentous algae on substrate, aquatic plants on middle gravel bar.

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Russ Mant Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #3. Upstream View



Site #3. Downstream View



Site #4. Upstream View



Site #4. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MED River de la Pave

Date/Time: 10/20/04 / 1200

Site/Transect ID Number: 3 1:4"

Start Time: 1200

End Time: 1230

Measured by: PE T.M

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	#	ft.	Start GPS #	End GPS #	#	ft.	Start GPS #	End GPS #
1	100	600		1	500	600		1	500	600	
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: 20° 30'

RDB Angle: —

Secchi (ft): —

Turbidity (NTU): —

Channel Comp (%):

Cobble

10

Gravel

20

Sand

30

Silt

—

Other

Gravel 40

Bank Composition

Fluvial riparian / 100% silt/clay

Riparian Corridor Density:

Width of Riparian Area:

—

Composition of Riparian Vegetation:

—

General Observations:

Stream Discharge Measurements

Beginning Stage

Ending Stage:

Total Q:

Channel Width:

Total Area:

Average Velocity:

Distance from Datum to Water Surface:

Start:

End:

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>Unclassified</u>		Site Location Description:	
Site Lat/Long: <u>39° 07' 35" N 92° 42' 21" W</u>		<u>T-4 River des Peres</u>	
Date & Time: <u>10/20/04 12:30</u>		Facility Name:	
Personnel: <u>RM/NN</u>		Permit Number:	
Current Weather Conditions: <u>Overcast</u>		Weather Conditions for Past 7 days: <u>Overcast</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>photos 13-16</u>	

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Fence opening ~150' downstream</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	25'	Length(ft)	200'	Ave. Depth(ft)	0.45	Max. Depth(ft)	0.72
<input checked="" type="checkbox"/> Run	Width(ft)	25'	Length(ft)	50'	Ave. Depth(ft)	0.45	Max. Depth(ft)	0.75
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	<u>Yes</u>	No		Estimated (ft ³ /sec):	1.0		

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	20'	Length(ft)	50'	Ave. Depth(ft)	0.5	Max. Depth(ft)	0.6
<input checked="" type="checkbox"/> Run	Width(ft)	23'	Length(ft)	100'	Ave. Depth(ft)	0.45	Max. Depth(ft)	0.56
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Flow	Present?	<u>Yes</u>	No		Estimated (ft ³ /sec):	1.0		

Substrate*: (These values should add up to 100%)

18 %Cobble	50 %Gravel	30 %Sand	— %Silt	2 %Mud/Clay	— %Bedrock
------------	------------	----------	---------	-------------	------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Gravel bar contains smartweed, willows, little algae on rocky substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input checked="" type="checkbox"/> Sewage ^①	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None ^{12m}	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input type="checkbox"/> None	<input type="checkbox"/> Other

① Near outfall discharge pipe

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Martin Date: 10/20/04Organization: NEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MEC - River Discharge

Date/Time: 11/10/01 12:00

Site/Transect ID Number: 4

Start Time: 12:00

End Time: 12:45

Measured by: RA

Air Temp: 20.5

Weather Cond: Partly Cloudy

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1	520 pool						300 run	330	
2							50 riff	380	
3							100 riff	480	
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: _____

RDB Angle: _____

Secchi (ft) _____

Turbidity (NTU): _____

Channel Comp (%):

Cobble

18

Gravel

50

Sand

30

Silt

Other Mud - 2%

Bank Composition

Flat rip rap / 10% gravel / 10% sand

Riparian Corridor Density:

Width of Riparian Area: _____

Composition of Riparian Vegetation: _____

General Observations:

Stream Discharge Measurements

Beginning Stage

Ending Stage:

Total Q: _____

Channel Width: _____

Total Area: _____

Average Velocity: _____

Distance from Datum to Water Surface:

Start:

End:

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

Stream Discharge Measurements													
Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width ft.	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0	1.0	1.82	0	0	0	0	0			
				1.0	1.74								
				1.0	1.69								
				1.0	1.64								
				1.0	1.59								
				1.0	1.54								
				1.0	1.49								
				1.0	1.44								
				1.0	1.39								
				1.0	1.34								
				1.0	1.29								
				1.0	1.24								
				1.0	1.19								
				1.0	1.14								
				1.0	1.09								
				1.0	1.04								
				1.0	1.00								
				1.0	.95								
				1.0	.90								
				1.0	.85								
				1.0	.80								
				1.0	.75								
				1.0	.70								
				1.0	.65								
				1.0	.60								
				1.0	.55								
				1.0	.50								
				1.0	.45								
				1.0	.40								
				1.0	.35								
				1.0	.30								
				1.0	.25								
				1.0	.20								
				1.0	.15								
				1.0	.10								
				1.0	.05								
				1.0	.00								

Aqua Calc Discharge:

Gravel 10' to 15' thick with 1' or less of clay at base

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>unclassified</u>	Site Location Description:	
Site Lat/Long: <u>*160(073823/4271754)</u>	<u>T-5 River des Peres</u>	
Date & Time: <u>10/22/04 1400</u>	Facility Name:	
Personnel: <u>NM/RM</u>	Permit Number:	
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>photos 17-20</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Cemetery</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Service Road, discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	26'	Length(ft)	500'	Ave. Depth(ft)	0.6	Max. Depth(ft)	0.8
<input checked="" type="checkbox"/> Pool	Width(ft)	23'	Length(ft)	500'	Ave. Depth(ft)	0.4	Max. Depth(ft)	0.6
<input checked="" type="checkbox"/> Flow	Present?	<u>Yes</u>	No		Estimated (ft ³ /sec):		0.5	

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	25'	Length(ft)	20'	Ave. Depth(ft)	0.1	Max. Depth(ft)	0.33
<input checked="" type="checkbox"/> Run	Width(ft)	28'	Length(ft)	100'	Ave. Depth(ft)	0.4	Max. Depth(ft)	0.8
<input checked="" type="checkbox"/> Pool	Width(ft)	23'	Length(ft)	300'	Ave. Depth(ft)	0.5	Max. Depth(ft)	1.0
<input type="checkbox"/> Flow	Present?	<u>Yes</u>	No		Estimated (ft ³ /sec):		1.0	

Substrate*: (These values should add up to 100%)

5 %Cobble	50 %Gravel	35 %Sand	— %Silt	— %Mud/Clay	10 % ^{fine} Bedrock
-----------	------------	----------	---------	-------------	------------------------------

Concrete

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Smartweed, bullrush, willows on gravel bar, very minimal algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: *Debbie Martin* Date: *10/20/04*

Organization: *MRC Water Resources* Position: *Environmental Specialist*

Appendix A River des Peres Site Photographs

Site #5. Right Descending Bank View



Site #5. Downstream View



Site #6. Left Descending Bank View



Site #6. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD River, Ariz.

Date/Time: 12/20/00 11:00

Site/Transect ID Number: T-5 #160

Start Time: 1400

End Time: 1415

Measured by: NH/EE

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: 23° 11'

RDB Angle: 117° 11'

Secchi (ft): ---

Turbidity (NTU): ---

Channel Comp (%):

Cobble 5

Gravel 50

Sand 30

Silt ---

Other 10%

Bank Composition

Flat rip rap

Riparian Corridor Density:

Width of Riparian Area: ---

Composition of Riparian Vegetation: ---

General Observations:

Stream Discharge Measurements

Beginning Stage

Ending Stage:

Total Q:

Channel Width:

Total Area:

Average Velocity:

Distance from Datum to Water Surface:

Start:

End:

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (ft/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0			0	0	0	0	0			
				4.0									
				8.0									
				12.0									
				16.0	0.2								
				20.0	0.4								
				24.0	0.6								
				28.0	0.8								
				32.0	1.0								
				40.0	0.6								
				44.0	0.2								
	60W			48.0									
				124									
				128	0.6								
				132	0.6								
				136	0.4								
				140	0.2								
				144	0.2								
	60W			147.2	0								

Log Sheet Totals:

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

45

40

124

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>unclassified</u>	Site Location Description:
Site Lat/Long: # <u>161(0735712/4271756)</u>	<u>T-6 River down River</u>
Date & Time: <u>10/20/04 1425</u>	Facility Name:
Personnel: <u>NM/RM</u>	Permit Number:
Current Weather Conditions: <u>overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 20-23</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	30'	Length(ft)	300'	Ave. Depth(ft)	0.60	Max. Depth(ft)	0.75
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):	0.8		

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	39.0'	Length(ft)	400'	Ave. Depth(ft)	0.65'	Max. Depth(ft)	0.85'
<input checked="" type="checkbox"/> Pool	Width(ft)	36.0'	Length(ft)	400'	Ave. Depth(ft)	0.75'	Max. Depth(ft)	0.35'
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):	1.0		

Substrate*: (These values should add up to 100%)

10 %Cobble	30 %Gravel	50 %Sand	— %Silt	— %Mud/Clay	10 %Bedrock
					concrete

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Smartweed, Bullrush, willows on gravel bars, very little algae on substrate, Allothromas present in channel

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Other Allothromas
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Amel Maitre Date: 10/20/04

Organization: MES Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MST-1000-1000

Date/Time: 10/10/00

Site/Transect ID Number: T-6 10/10

Start Time: 1425

End Time: 1445

Measured by: RW/100

Air Temp: 10.5

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1	100	150					12		
2	10	160					10		
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle:

RDB Angle:

Secchi (ft)

Turbidity (NTU):

Channel Comp (%): Cobble 10 Gravel 30 Sand 50 Silt
Other 10 Concrete

Bank Composition Soft mud to sand, some gravel, some silt

Riparian Corridor Density: Width of Riparian Area:

Composition of Riparian Vegetation:

General Observations: @ Bridge 0.1m from left, several, upper, very in minor debris.
length 12', width 0.3'

Stream Discharge Measurements

Beginning Stage:

Ending Stage:

Total Q:

Channel Width:

Total Area:

Average Velocity:

Distance from Datum to Water Surface:

Start:

End:

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0	0.0	0.2	0	0	0	0	0			
				4.0	0.6								
				8.0	0.8								
				12.0	0.8								
				16.0	0.8								
				20.0	0.8								
				24.0	0.8								
				28.0	0.8								
				32.0	0.8								
				36.0	0.8								
				40.0	0.8								
				44.0	0.8								
				48.0	0.8								
				52.0	0.8								
				56.0	0.8								
				60.0	0.8								
				64.0	0.8								
				68.0	0.8								
				72.0	0.8								
				76.0	0.8								
				80.0	0.8								
				84.0	0.8								
				88.0	0.8								
				92.0	0.8								
				96.0	0.8								
				100.0	0.8								
				104.0	0.8								
				108.0	0.8								
				112.0	0.8								
				116.0	0.8								
				120.0	0.8								
				124.0	0.8								
				128.0	0.8								
				132.0	0.8								
				136.0	0.8								
				140.0	0.8								
				144.0	0.8								
				148.0	0.8								
				152.0	0.8								
				156.0	0.8								
				160.0	0.8								
				164.0	0.8								
				168.0	0.8								
				172.0	0.8								
				176.0	0.8								
				180.0	0.8								
				184.0	0.8								
				188.0	0.8								
				192.0	0.8								
				196.0	0.8								
				200.0	0.8								
				204.0	0.8								
				208.0	0.8								
				212.0	0.8								
				216.0	0.8								
				220.0	0.8								
				224.0	0.8								
				228.0	0.8								
				232.0	0.8								
				236.0	0.8								
				240.0	0.8								
				244.0	0.8								
				248.0	0.8								
				252.0	0.8								
				256.0	0.8								
				260.0	0.8								
				264.0	0.8								
				268.0	0.8								
				272.0	0.8								
				276.0	0.8								
				280.0	0.8								
				284.0	0.8								
				288.0	0.8								
				292.0	0.8								
				296.0	0.8								
				300.0	0.8								
				304.0	0.8								
				308.0	0.8								
				312.0	0.8								
				316.0	0.8								
				320.0	0.8								
				324.0	0.8								
				328.0	0.8								
				332.0	0.8								
				336.0	0.8								
				340.0	0.8								
				344.0	0.8								
				348.0	0.8								
				352.0	0.8								
				356.0	0.8								
				360.0	0.8								

Log Sheet Totals:

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

7/1/00
7/1/00
7/1/00
7/1/00
7/1/00

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>unclassified</u>	Site Location Description:
Site Lat/Long: <u>#162(0735921/4271544)</u>	<u>T-7 River des Peres</u>
Date & Time: <u>10/20/04 1500</u>	Facility Name:
Personnel: <u>PM/NM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 27-29</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input checked="" type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes, photo* 2A access service road.</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	16'	Length(ft)	100'	Ave. Depth(ft)	0.4	Max. Depth(ft)	0.8
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):	0.5		

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	16'	Length(ft)	20'	Ave. Depth(ft)	0.2	Max. Depth(ft)	0.5
<input checked="" type="checkbox"/> Run	Width(ft)	16'	Length(ft)	50'	Ave. Depth(ft)	0.4	Max. Depth(ft)	0.8
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):	0.7		

Substrate*: (These values should add up to 100%)

15 %Cobble	30 %Gravel	50 %Sand	— %Silt	— %Mud/Clay	5 %Bedrock	run concrete
------------	------------	----------	---------	-------------	------------	--------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

W, flow, structured along RDB & LDB, gravel bar in river, little to no algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input checked="" type="checkbox"/> Sewage ①	<input checked="" type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

① Near pump station, photo #26, outfall pipe flowing under river bed.

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Martin Date: 10/20/04

Organization: Mec Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #7. Upstream View



Site #7. Right Descending Bank View



Site #8. Upstream View



Site #8. Right Descending Bank View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL- River-1-100

Date/Time: 12/10/04 10:20

Site/Transect ID Number: T-7 102

Start Time: 15:00

End Time: 15:15

Measured by: PM/100

Air Temp: 50 °F

Weather Cond: Clear

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1		500					100	500	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: -

RDB Angle: -

Secchi (ft) -

Turbidity (NTU): -

Channel Comp (%): Cobble 15 Gravel 30 Sand 50 Silt -
Other 5 (mud)

Bank Composition: 100% gravel

Riparian Corridor Density: - Width of Riparian Area: -

Composition of Riparian Vegetation: -

General Observations: -

Stream Discharge Measurements

Beginning Stage: - Ending Stage: - Total Q: -

Channel Width: - Total Area: - Average Velocity: -

Distance from Datum to Water Surface: - Start: - End: -

Meas. type: Price AA Pygmy Data Coll. Type: Aqua Calc Sheet Aqua Calc Transect #: -

Stream Discharge Measurements

[illegible]

Log Sheet Totals:

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

117

24

10

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>Unclassified</u>		Site Location Description:	
Site Lat/Long: <u>#1163(0730027/4271522)</u>		<u>T-8 River des Peres</u>	
Date & Time: <u>10/22/04 1525</u>		Facility Name:	
Personnel: <u>RMI NM</u>		Permit Number:	
Current Weather Conditions: <u>Overcast</u>		Weather Conditions for Past 7 days: <u>Overcast</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>Photos 36-37 38-39</u> run 33	

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>run Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Pool	Width(ft) 45'	Length(ft) 500'	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.2
<input type="checkbox"/> Flow	Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Estimated (ft ³ /sec):	0

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 45'	Length(ft) 50'	Ave. Depth(ft) 0.95	Max. Depth(ft) 1.3
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Estimated (ft ³ /sec):	1.0

Substrate*: (These values should add up to 100%)

15 %Cobble	30 %Gravel	50 %Sand	— %Silt	— %Mud/Clay	5 %Bedrock ^{pen} concrete
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Willows, fluff ^{fluff} , macrophytes ^{macrophytes} along gravel bed, LDB/RDB, No algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Monte Date: 10/20/04

Organization: Mt. Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL River des Peres

Date/Time: 7/1/00 1:00

Site/Transect ID Number: 165 7

Start Time: 1525

End Time: 15:20

Measured by: D. H. H.

Air Temp: 50°F

Weather Cond: Clear

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #		
1							75'	1)			
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: —

RDB Angle: —

Secchi (ft) —

Turbidity (NTU): —

Channel Comp (%):

Cobble 15

Gravel 30

Sand 50

Silt —

Other 5 percent

Bank Composition

Fluv. m. silt, coarse sand

Riparian Corridor Density:

Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations:

At 600' from start, LDB channel is 1' x 1'.

Stream Discharge Measurements

Beginning Stage —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface:

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

Stream Discharge Measurements

[illegible]**Log Sheet Totals:**

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>unclassified</u>	Site Location Description:	
Site Lat/Long: <u>*164 (0736S 44271510)</u>	<u>T-9 River des Paves</u>	
Date & Time: <u>10/20/04 1545</u>	Facility Name:	
Personnel: <u>RM / NM</u>	Permit Number:	
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>photos 35-38 RM 34-37</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Service Roads, discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Pool	Width(ft)	60	Length(ft)	75	Ave. Depth(ft)	1.1	Max. Depth(ft)	2.0
<input type="checkbox"/> Flow	Present?	Yes	<input checked="" type="radio"/> No		Estimated (ft ³ /sec):			

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Pool	Width(ft)	65	Length(ft)	200	Ave. Depth(ft)	1.0	Max. Depth(ft)	1.3
<input type="checkbox"/> Flow	Present?	Yes	<input checked="" type="radio"/> No		Estimated (ft ³ /sec):			

Substrate*: (These values should add up to 100%)

20 %Cobble	30 %Gravel	30 %Sand	— %Silt	— %Mud/Clay	20 %Bedrock	Run Concrete
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

No algae on substrate, willows, smothered along gravel bars / banks

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Mount Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #9. Upstream View



Site #9. Downstream View



Site #10. Upstream View



Site #10. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: 1115 Lower Long River

Date/Time: 2/26/01 5:00

Site/Transect ID Number: 12 7-0

Start Time: 1545

End Time: 1600

Measured by: RD-NN

Air Temp: 22.8

Weather Cond: Cloudy

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: ---

RDB Angle: ---

Secchi (ft) ---

Turbidity (NTU): ---

Channel Comp (%): Cobble 20 Gravel 30 Sand 30 Silt ---

Other 20 Concrete

Bank Composition 1/2 ft rip rap, concrete rubble

Riparian Corridor Density: --- Width of Riparian Area: ---

Composition of Riparian Vegetation: ---

General Observations: ---

Stream Discharge Measurements

Beginning Stage --- Ending Stage: --- Total Q: ---

Channel Width: --- Total Area: --- Average Velocity: ---

Distance from Datum to Water Surface: --- Start: --- End: ---

Meas. type: Price AA Pygmy Data Coll. Type: Aqua Calc Sheet Aqua Calc Transect #: ---

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1711</u>	Site Location Description:	
Site Lat/Long: <u>#165 (0734840) 42712.3</u>	<u>T-10 River des Peres</u>	
Date & Time: <u>10/20/04 1620</u>	Facility Name:	
Personnel: <u>RM/NN</u>	Permit Number:	
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>plates 38-42</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge Pipes, Outfall drains, Service Roads</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 24'	Length(ft) 500'	Ave. Depth(ft) 0.85	Max. Depth(ft) 1.0
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Estimated (ft ³ /sec):	

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 27'	Length(ft) 30'	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.0
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Estimated (ft ³ /sec): 0.5	

Substrate*: (These values should add up to 100%)

50 %Cobble	40 %Gravel	10 %Sand	— %Silt	— %Mud/Clay	— %Bedrock
------------	------------	----------	---------	-------------	------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

grasses, willows, smartweed on banks; gravel bar

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Daniel Mont Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: 1150 - River de la Force

Date/Time: 11/10/10 1:15

Site/Transect ID Number: 7-10 14

Start Time: 1620

End Time: 1630

Measured by: RK/NM

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #		
1							50	530			
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: —

RDB Angle: —

Secchi (ft) —

Turbidity (NTU): —

Channel Comp (%):

Cobble 50

Gravel 40

Sand 10

Silt —

Other

Bank Composition

100% silt, clay

Riparian Corridor Density:

Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations:

Stream Discharge Measurements

Beginning Stage —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface:

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

[illegible]

I:\General Data Sheets\Stream Morphology & Discharge Form

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1711</u>	Site Location Description:
Site Lat/Long: <u>#166(0737100/4271051)</u>	<u>T-11 River des Peres</u>
Date & Time: <u>10/20/04 1630</u>	Facility Name:
Personnel: <u>RH/NM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 43-46</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	40	Length(ft)	200	Ave. Depth(ft)	0.75	Max. Depth(ft)	1.0
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Flow	Present?	Yes	<input checked="" type="checkbox"/> No		Estimated (ft ³ /sec):			

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	35	Length(ft)	300	Ave. Depth(ft)	0.75	Max. Depth(ft)	1.08
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Flow	Present?	Yes	<input checked="" type="checkbox"/> No		Estimated (ft ³ /sec):			

Substrate*: (These values should add up to 100%)

40 %Cobble	40 %Gravel	20 %Sand	— %Silt	— %Mud/Clay	— %Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

grasses, willows, smartweed along banks & in gravel bar in channel

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: James Mont Date: 10/20/04

Organization: MFC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #11. Upstream View



Site #11. Downstream View



Site #12. Upstream View



Site #12. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL River des Peres

Date/Time: 10/20/01 1630

Site/Transect ID Number: T-11 - 1610

Start Time: 1630

End Time: 1645

Measured by: RW/NV

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles	
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1				<u>70'</u>	<u>675</u>		<u>90'</u>	<u>680</u>	
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: 10° 25'

RDB Angle: 1° 12'

Secchi (ft): —

Turbidity (NTU): —

Channel Comp (%): Cobble 40 Gravel 40 Sand 20 Silt —
Other —

Bank Composition: Flt rip rap / concrete

Riparian Corridor Density: Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage: — Ending Stage: — Total Q: —

Channel Width: — Total Area: — Average Velocity: —

Distance from Datum to Water Surface: — Start: — End: —

Meas. type: Price AA Pygmy Data Coll. Type: Aqua Calc Sheet Aqua Calc Transect #: —

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0			0	0	0	0	0			
				1.0	0.15								
				4.0	0.22								
				8.0	0.62								
				12.0	2.71								
				16.0	0.19								
				20.0	0.22								
				24.0	1.05								
				28.0	1.0								
				32.0	1.0								
				36.0	0.8								
				38.0	0.5								
				40.0	0.1								
	1.00			40.0	0								

Log Sheet Totals:

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>711</u>	Site Location Description:
Site Lat/Long: <u>*167 (0737400/4271040)</u>	<u>T-12, River des Peres</u>
Date & Time: <u>10/20/04 1650</u>	Facility Name:
Personnel: <u>RNLM</u>	Permit Number:
Current Weather Conditions: <u>overcast</u>	Weather Conditions for Past 7 days: <u>overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photo 47-50</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes, service roads</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 35'	Length(ft) 100'	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.1
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Estimated (ft ³ /sec):	

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 40'	Length(ft) 50'	Ave. Depth(ft) 0.1	Max. Depth(ft) 0.5
<input checked="" type="checkbox"/> Run	Width(ft) 35'	Length(ft) 300'	Ave. Depth(ft) 0.5	Max. Depth(ft) 1.0
<input checked="" type="checkbox"/> Pool	Width(ft) 40'	Length(ft) 75'	Ave. Depth(ft) 1.5	Max. Depth(ft) 1.9
<input checked="" type="checkbox"/> Flow	Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Estimated (ft ³ /sec): 0.5	

Substrate*: (These values should add up to 100%)

70 %Cobble	30 %Gravel	50 %Sand	— %Silt	— %Mud/Clay	— %Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

grasses / smartweed / willows along banks & in gravel bar. No algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Deanne Muth Date: 10/20/04

Organization: NEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL - Pine Creek

Date/Time: 10/20/04 / 1630

Site/Transect ID Number: T-12 - 1630

Start Time: 1630

End Time: 1705

Measured by: RM/WM

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: —

RDB Angle: —

Secchi (ft) —

Turbidity (NTU): —

Channel Comp (%): Cobble 20 Gravel 30 Sand 50 Silt —
Other —

Bank Composition Flint rip rap / Cu sh. bedding

Riparian Corridor Density: — Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1711</u>	Site Location Description:
Site Lat/Long: <u>#168 (0737483/4270912)</u>	<u>T-13 River des Peres</u>
Date & Time: <u>10/20/04 1710</u>	Facility Name:
Personnel: <u>NM/RM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 51-54</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 12'	Length(ft) 50'	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.0
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input checked="" type="checkbox"/> No	Estimated (ft ³ /sec):	

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 25'	Length(ft) 500'	Ave. Depth(ft) 1.1	Max. Depth(ft) 1.5
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes <input checked="" type="checkbox"/> No	Estimated (ft ³ /sec):	

Substrate*: (These values should add up to 100%)

30% Cobble	10 % Gravel	10 % Sand	— % Silt	— % Mud/Clay	50 % Bedrock ¹²⁴⁴
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Concrete

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

No algae on substrate, willows, smothered + grasses along banks, in gravel bar.

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Sean Smith Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #13. Left Descending Bank View



Site #13. Downstream View



Site #14. Upstream View



Site #14. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL - Pine Grove

Date/Time: 10/20/04 11:00

Site/Transect ID Number: T-13 163"

Start Time: 11:00

End Time: 1725

Measured by: VM/NM

Air Temp: 50°F

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	#	ft.	Start GPS #	End GPS #	#	ft.	Start GPS #	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: 110°

RDB Angle: 120°

Secchi (ft): 1.5

Turbidity (NTU): 1.5

Channel Comp (%): Cobble 30 Gravel 10 Sand 10 Silt —

Other 50 Concrete

Bank Composition flat rip rap to 20 ft

Riparian Corridor Density: Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage: —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1711</u>	Site Location Description:
Site Lat/Long: <u>#161673734/4270693</u>	<u>T-14 Rue des Peres</u>
Date & Time: <u>10/20/04 1740</u>	Facility Name:
Personnel: <u>BLN/AM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photo 55-58</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Interstate / Hwy w/ walking</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 45	Length(ft) 200	Ave. Depth(ft) 1.5	Max. Depth(ft) 1.9
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present? <u>Yes</u>	No	Estimated (ft ³ /sec):	0.2

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Run	Width(ft) 45'	Length(ft) 300'	Ave. Depth(ft) 1.2	Max. Depth(ft) 1.7
<input checked="" type="checkbox"/> Pool*	Width(ft) 170	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present? <u>Yes</u>	No	Estimated (ft ³ /sec):	0.2

Substrate*: (These values should add up to 100%)

20% Cobble	35% Gravel	20% Sand	— % Silt	5% Mud/Clay	10% Bedrock ^{20%} _{10% silt}
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

No algae, willows, smartweed, grasses on banks & gravel bar.

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

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I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Steve Maib Date: 10/20/04

Organization: MEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MS. R. ...

Date/Time: 2/20/01 17:00

Site/Transect ID Number: #169 T-14

Start Time: 1740

End Time: 1800

Measured by: BN/ND

Air Temp: 58°

Weather Cond: Overcast

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: —

RDB Angle: —

Secchi (ft): —

Turbidity (NTU): —

Channel Comp (%): Cobble 30 Gravel 30 Sand 20 Silt —

Other Mud - 5% wood 10%

Bank Composition Flat rip rap / ...

Riparian Corridor Density: Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage: —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - In seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0	1.2	0.2	0	0	0	0	0			
				2.2	0.2								
				3.2	1.2								
				4.2	1.2								
				5.2	1.5								
				6.2	1.2								
				7.2	1.2								
				8.2	1.2								
				9.2	1.2								
				10.2	1.2								
				11.2	1.2								
				12.2	1.2								
				13.2	1.2								
				14.2	1.2								
				15.2	1.2								
				16.2	1.2								
				17.2	1.2								
				18.2	1.2								
				19.2	1.2								
				20.2	1.2								
				21.2	1.2								
				22.2	1.2								
				23.2	1.2								
				24.2	1.2								
				25.2	1.2								
				26.2	1.2								
				27.2	1.2								
				28.2	1.2								
				29.2	1.2								
				30.2	1.2								
				31.2	1.2								
				32.2	1.2								
				33.2	1.2								
				34.2	1.2								
				35.2	1.2								
				36.2	1.2								
				37.2	1.2								
				38.2	1.2								
				39.2	1.2								
				40.2	1.2								
				41.2	1.2								
				42.2	1.2								
				43.2	1.2								
				44.2	1.2								
				45.2	1.2								
				46.2	1.2								
				47.2	1.2								
				48.2	1.2								
				49.2	1.2								
				50.2	1.2								
				51.2	1.2								
				52.2	1.2								
				53.2	1.2								
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				67.2	1.2								
				68.2	1.2								
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				89.2	1.2								
				90.2	1.2								
				91.2	1.2								
				92.2	1.2								
				93.2	1.2								
				94.2	1.2								
				95.2	1.2								
				96.2	1.2								
				97.2	1.2								
				98.2	1.2								
				99.2	1.2								
				100.2	1.2								

Log Sheet Totals:

Sheet Calculated Discharge:

Aqua Calc Discharge:

Remarks:

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1711</u>	Site Location Description:
Site Lat/Long: # <u>171 (0737778/4270373)</u>	<u>T-15 River des Peres</u>
Date & Time: <u>10/20/04 1800</u>	Facility Name:
Personnel: <u>NM BM</u>	Permit Number:
Current Weather Conditions: <u>overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other: <u>photos 59-62</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input checked="" type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge drains/pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Pool	Width(ft)	40'	Length(ft)	50'	Ave. Depth(ft)	0.5	Max. Depth(ft)	1.0
<input type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):			

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	20	Length(ft)	25	Ave. Depth(ft)	0.3	Max. Depth(ft)	0.4
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec): 0.5			

Substrate*: (These values should add up to 100%)

20 %Cobble	50 %Gravel	30 %Sand	— %Silt	— %Mud/Clay	— %Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

No algae on substrate, grasses, willows, smartweed on gravel bar, banksides

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Deann Math Date: 10/20/04

Organization: MEX Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #15. Upstream View



Site #15. Downstream View



Site #16 - Photos Unavailable

Site #17. Upstream View



Site #17. Downstream View



3

Site/Transect ID Number: 15 / 141

Weather Cond: Fair

Length of Riffles

[illegible]

Turbidity (NTU):

Aqua Calc Transect #:

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description:
Site Lat/Long: * <u>37.21677773 / -93.762000</u>	<u>T-16 River des Peres</u>
Date & Time: <u>10/20/04 1815</u>	Facility Name:
Personnel: <u>BAM UM</u>	Permit Number:
Current Weather Conditions: <u>Overcast</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream:	Downstream: Other:

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)				

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Industrial</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input checked="" type="checkbox"/> Other: <u>Discharge pipes</u>				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft)	12'	Length(ft)	20'	Ave. Depth(ft)	0.4	Max. Depth(ft)	0.62
<input type="checkbox"/> Run	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):			0.55

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Run	Width(ft)	50	Length(ft)	300	Ave. Depth(ft)	0.5	Max. Depth(ft)	0.7
<input type="checkbox"/> Pool	Width(ft)		Length(ft)		Ave. Depth(ft)		Max. Depth(ft)	
<input checked="" type="checkbox"/> Flow	Present?	Yes	No		Estimated (ft ³ /sec):			1.0

Substrate*: (These values should add up to 100%)

40 %Cobble	30 %Gravel	30 %Sand	— %Silt	— %Mud/Clay	— %Bedrock
------------	------------	----------	---------	-------------	------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Smartweed, on gravel bar, willows along banks, No algae on substrate

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input checked="" type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Steve Mart Date: 10/20/04

Organization: Met With Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSL - Pine Bluffs

Date/Time: 10/12/11

Site/Transect ID Number: #112, T-1

Start Time: 1215

End Time: 1245

Measured by: FR/ND

Air Temp: 10.0°

Weather Cond: clear

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: —

RDB Angle: —

Secchi (ft) —

Turbidity (NTU): 3.82

Channel Comp (%): Cobble 40 Gravel 30 Sand 30 Silt —
Other —

Bank Composition flint, silt, clay, sand, gravel

Riparian Corridor Density: — Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage: —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0	2.0	0.2	0	0	0	0	0			
				2.0	0.4								
				2.0	0.6								
				2.0	0.8								
				2.0	1.0								
				2.0	1.2								
				2.0	1.4								
				2.0	1.6								
				2.0	1.8								
				2.0	2.0								
				2.0	2.2								
				2.0	2.4								
				2.0	2.6								
				2.0	2.8								
				2.0	3.0								
				2.0	3.2								
				2.0	3.4								
				2.0	3.6								
				2.0	3.8								
				2.0	4.0								
				2.0	4.2								
				2.0	4.4								
				2.0	4.6								
				2.0	4.8								
				2.0	5.0								
				2.0	5.2								
				2.0	5.4								
				2.0	5.6								
				2.0	5.8								
				2.0	6.0								
				2.0	6.2								
				2.0	6.4								
				2.0	6.6								
				2.0	6.8								
				2.0	7.0								
				2.0	7.2								
				2.0	7.4								
				2.0	7.6								
				2.0	7.8								
				2.0	8.0								
				2.0	8.2								
				2.0	8.4								
				2.0	8.6								
				2.0	8.8								
				2.0	9.0								
				2.0	9.2								
				2.0	9.4								
				2.0	9.6								
				2.0	9.8								
				2.0	10.0								
				2.0	10.2								
				2.0	10.4								
				2.0	10.6								
				2.0	10.8								
				2.0	11.0								
				2.0	11.2								
				2.0	11.4								
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				2.0	12.0								
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				2.0	13.8								
				2.0	14.0								
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				2.0	14.8								
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				2.0	15.4								
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				2.0	15.8								
				2.0	16.0								
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				2.0	16.4								
				2.0	16.6								
				2.0	16.8								
				2.0	17.0								
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				2.0	17.8								
				2.0	18.0								
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				2.0	25.4								
				2.0	25.6								
				2.0	25.8								
				2.0	26.0								
				2.0	26.2								
				2.0	26.4								
				2.0	26.6								
				2.0	26.8								
				2.0	27.0								
				2.0	27.2								
				2.0	27.4								
				2.0	27.6								
				2.0	27.8								
				2.0	28.0								
				2.0	28.2								
				2.0	28.4								
				2.0	28.6								
				2.0	28.8								
				2.0	29.0								
				2.0	29.2								
				2.0	29.4								
				2.0	29.6								
				2.0	29.8								
				2.0	30.0								
				2.0	30.2								
				2.0	30.4								
				2.0	30.6								
				2.0	30.8								
				2.0	31.0								
				2.0	31.2								
				2.0	31.4								
				2.0	31.6								
				2.0	31.8								
				2.0	32.0								
				2.0	32.2								
				2.0	32.4								
				2.0	32.6								
				2.0	32.8								
				2.0	33.0								
				2.0	33.2								
				2.0	33.4								
				2.0	33.6								
				2.0	33.8								

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description: <u>17 - River des Paves</u>
Site Lat/Long: <u>0737806 / 4269897</u>	
Date & Time: <u>6/21/04 1435</u>	Facility Name:
Personnel: <u>NM/CL</u>	Permit Number:
Current Weather Conditions: <u>Cloudy</u>	Weather Conditions for Past 7 days: <u>Cloudy</u>
Photo Ids: Upstream:	Downstream:
	Other:

Pic #s 0090-0099

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Roads - both sides</u>	

Evidence of Human Use*:

<input checked="" type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Pool	Width(ft) 60	Length(ft) 100	Ave. Depth(ft) 0.5	Max. Depth(ft) 1.5
<input checked="" type="checkbox"/> Flow	Present?	<u>Yes</u> No	Estimated (ft ³ /sec): 10	

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 75	Length(ft) 50	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.0
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Pool	Width(ft) 40	Length(ft) 100	Ave. Depth(ft) 0.4	Max. Depth(ft) 1.5
<input checked="" type="checkbox"/> Flow	Present?	<u>Yes</u> No	Estimated (ft ³ /sec): 10	

Substrate*: (These values should add up to 100%)

80 %Cobble	20 %Gravel	0 %Sand	0 %Silt	0 %Mud/Clay	0 %Bedrock
------------	------------	---------	---------	-------------	------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>some benthic algae</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input checked="" type="checkbox"/> Fine sediments	<input type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Laurel Smith Date: 10/21/04
 Organization: _____ Position: _____

Appendix A River des Peres Site Photographs

Site #15. Upstream View



Site #15. Downstream View



Site #16 - Photos Unavailable

Site #17. Upstream View



Site #17. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD UAA

Date/Time: 10/21/04 14:35

Site/Transect ID Number: 17 - River Day Perc's

Start Time: 14:35

End Time: 14:50

Measured by: NM/LL

Air Temp: 55°F

Weather Cond: Cloudy

Site 181 GPS

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Taken @ RDB

Stream Morphology At Transect

LDB Angle: 14°/E

RDB Angle: 29°/16°

Secchi (ft) —

Turbidity (NTU): —

@ RDB (15')

@ 95' from LDB

Channel Comp (%): Cobble 80 Gravel 20 Sand — Silt —

Other

Bank Composition Concrete / Riprap

Riparian Corridor Density: Width of Riparian Area: —

Composition of Riparian Vegetation: —

General Observations: —

Stream Discharge Measurements

Beginning Stage —

Ending Stage: —

Total Q: —

Channel Width: —

Total Area: —

Average Velocity: —

Distance from Datum to Water Surface: —

Start: —

End: —

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: —

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description:
Site Lat/Long: ^{NM} <u>70°21'04" 73°7'12" 4269572</u>	<u>River Des Peres -- 18</u>
Date & Time: <u>15:00 10/20/04</u>	Facility Name:
Personnel: <u>NM/CL</u>	Permit Number:
Current Weather Conditions: <u>cloudy</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream: <u>101</u>	Downstream: <u>103</u> Other: <u>Banks - 100 & 102</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 10.5	Length(ft) 200	Ave. Depth(ft) 0.4	Max. Depth(ft) 1.0
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present?	Yes	No	Estimated (ft ³ /sec): @ 10

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 6.0	Length(ft) 50	Ave. Depth(ft) 0.6	Max. Depth(ft) 0.8
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present?	Yes	No	Estimated (ft ³ /sec): @ 10

Substrate*: (These values should add up to 100%)

80 %Cobble	20 %Gravel	0 %Sand	0 %Silt	0 %Mud/Clay	%Bedrock
------------	------------	---------	---------	-------------	----------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

some benthic algae

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Cassidy Schubert Date: 10/21/09
 Organization: _____ Position: _____

Appendix A River des Peres Site Photographs

Site #18. Upstream View



Site #18. Downstream View



Site #19. Upstream View



Site #19. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD - UAA

Date/Time: 10/21/04 15:00

Site/Transect ID Number: 18 - River Des Peres

Start Time: 15:00

End Time: 15:15

Measured by: WM/LL

Air Temp: 55°F

Weather Cond: Cloudy

GPS Pnt - 182

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles	
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: -

RDB Angle: -

Secchi (ft) -

Turbidity (NTU): -

Channel Comp (%):

Cobble 80

Gravel 20

Sand -

Silt -

Other -

Bank Composition Concrete Riprap

Riparian Corridor Density:

Width of Riparian Area: 8' ~~RDB = 30'~~ RDB ~~40'~~ LDB = 0 RDB = 0

Composition of Riparian Vegetation: -

General Observations:

Stream Discharge Measurements

Beginning Stage -

Ending Stage: -

Total Q: -

Channel Width: -

Total Area: -

Average Velocity: -

Distance from Datum to Water Surface:

Start: -

End: -

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

Stream Discharge Measurements

Time	Station #	Angle Coefficient	Distance (from Initial Point-ft.)	Width	Depth (ft.)	Observation Depth	Revs.	Interval Time - in seconds	Velocity (f/s)		Adjusted for Hor. Angle	Section Area (ft. ²)	Section Discharge (cfs)
									At Point	Mean in Vertical			
	1 (EOW)		0		0	0	0	0	0	0			
	+		1		0.7								
			6		1.15								
			11		1.0								
			16		1.05								
			20		0.4								
			22		0.1								
			23		0								
			34		0								
			35		0.2								
			37		0.23								
			39		0.2								
			40		0								
			46		0								
			47		0.4								
			52		0.6								
			57		0.65								
			62		0.5								
			67		0.5								
			72		0.5								
			77		0.2								
			82		0.3								
			87		0.3								
			92		0.3								
			97		0.4								
			102		0.7								
			107		0.4								
			112		0.35								
			117		0.2								
			119		0.3								
			121		0								
			131		0								
Remarks:			136		0.3								
			139		0.3								
			142		0								

Log Sheet Totals: _____

Sheet Calculated Discharge: _____

Aqua Calc Discharge: _____

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description:	
Site Lat/Long: <u>#183 6737437/4269249</u>	<u>River des Peres T-19</u>	
Date & Time: <u>10/21/04 1520</u>	Facility Name:	
Personnel: <u>NM/CL</u>	Permit Number:	
Current Weather Conditions: <u>Cloudy</u>	Weather Conditions for Past 7 days:	
Photo Ids: Upstream: <u>105</u>	Downstream: <u>107</u>	Other: <u>104 & 106</u>

pic. #s - 9-12

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Pool	Width(ft) 80	Length(ft) 250	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.2
<input checked="" type="checkbox"/> Flow	Present? (Yes)	No	Estimated (ft ³ /sec):	10

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Pool	Width(ft) 60	Length(ft) 150	Ave. Depth(ft) 0.8	Max. Depth(ft) 1.2
<input checked="" type="checkbox"/> Flow	Present? (Yes)	No	Estimated (ft ³ /sec):	10

Substrate*: (These values should add up to 100%)

80 %Cobble	20 %Gravel	— %Sand	— %Silt	— %Mud/Clay	— %Bedrock
------------	------------	---------	---------	-------------	------------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

some benthic algae

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Cassidy Smith Date: 10/21/09

Organization: MEC Water Resources Position: Environmental Specialist

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD UAA

Date/Time: 10/21/04 / 1520

Site/Transect ID Number: 19

Start Time: 15:20

End Time: 15:35

Measured by: NM/CL

Air Temp: 55°F

Weather Cond: cloudy

Stream Morphology Between Transects

Length of Pools				Length of Run			Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Stream Morphology At Transect

LDB Angle: _____

RDB Angle: _____

Secchi (ft) _____

Turbidity (NTU): _____

Channel Comp (%):

Cobble 80

Gravel 20

Sand _____

Silt _____

Other _____

Bank Composition Rock, Concrete

Riparian Corridor Density:

Width of Riparian Area: 50'

Composition of Riparian Vegetation: Trees, shrubs, forbs

General Observations: _____

Stream Discharge Measurements

Beginning Stage _____

Ending Stage: _____

Total Q: _____

Channel Width: _____

Total Area: _____

Average Velocity: _____

Distance from Datum to Water Surface: _____

Start: _____

End: _____

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: _____

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description: <u>(2738136/4269000)</u>
Site Lat/Long: <u>38° 18' 35" N - 93° 07' 37" W</u>	<u>T-20 River des Peres</u>
Date & Time: <u>10/21/04 15:40</u>	Facility Name:
Personnel: <u>NM/CL</u>	Permit Number:
Current Weather Conditions: <u>Cloudy</u>	Weather Conditions for Past 7 days: <u>Overcast</u>
Photo Ids: Upstream: <u>109</u> Downstream: <u>111</u> Other: <u>108 # 110 Banks</u>	

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input checked="" type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Survey Crew

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) <u>60</u>	Length(ft) <u>200</u>	Ave. Depth(ft) <u>0.4</u>	Max. Depth(ft) <u>0.8</u>
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Estimated (ft ³ /sec): <u>10</u>	

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) <u>90</u>	Length(ft) <u>50</u>	Ave. Depth(ft) <u>1.3</u>	Max. Depth(ft) <u>0.7</u>
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present?	<input checked="" type="radio"/> Yes <input type="radio"/> No	Estimated (ft ³ /sec): <u>10</u>	

Substrate*: (These values should add up to 100%)

<u>50</u> %Cobble	<u>50</u> %Gravel	%Sand	%Silt	%Mud/Clay	%Bedrock
-------------------	-------------------	-------	-------	-----------	----------

Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>Some benthic Algae</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Cassidy Smith Date: 10/21/14

Organization: MLC Water Resources Position: Environmental Specialist

Appendix A River des Peres Site Photographs

Site #20. Upstream View



Site #20. Downstream View



Site #21. Upstream View



Site #21. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD UAA

Date/Time: 10/24/04 1540

Site/Transect ID Number: T-20

Start Time: 1540

End Time: 1600

Measured by: NM/CL

Air Temp: 55°F

Weather Cond: cloudy

Stream Morphology Between Transects

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: _____

RDB Angle: _____

Secchi (ft) _____

Turbidity (NTU): _____

Channel Comp (%):

Cobble 50

Gravel 50

Sand _____

Silt _____

Other _____

Bank Composition Concrete, Rock

Riparian Corridor Density: _____

Width of Riparian Area: 0

Composition of Riparian Vegetation: _____

General Observations: _____

Stream Discharge Measurements

Beginning Stage _____

Ending Stage: _____

Total Q: _____

Channel Width: _____

Total Area: _____

Average Velocity: _____

Distance from Datum to Water Surface: _____

Start: _____

End: _____

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>		Site Location Description:	
Site Lat/Long: <u>6738313 / 4268837</u>		<u>River Des Peres - 21</u>	
Date & Time: <u>10/21/04 16:05</u>		Facility Name:	
Personnel: <u>DM/c</u>		Permit Number:	
Current Weather Conditions: <u>Cloudy</u>		Weather Conditions for Past 7 days: <u>Cloudy</u>	
Photo Ids: Upstream: <u>0113</u>	Downstream: <u>0115</u>	Other: <u>0112 & 0114 Banks</u>	
<u>Pics # 17-20</u>			
Used Observed*:			
<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above
		<input type="checkbox"/> Water Skiing	<input type="checkbox"/> Rafting
		<input type="checkbox"/> Other	
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)			

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input checked="" type="checkbox"/> Other: <u>Exclusionary</u>	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 110	Length(ft) 500	Ave. Depth(ft) 0.4	Max. Depth(ft) 0.9
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present? <u>Yes</u>	No	Estimated (ft ³ /sec):	210

Downstream View Physical Dimensions:

<input checked="" type="checkbox"/> Riffle	Width(ft) 110	Length(ft) 500	Ave. Depth(ft) 0.4	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input checked="" type="checkbox"/> Flow	Present? <u>Yes</u>	No	Estimated (ft ³ /sec):	210

Substrate*: (These values should add up to 100%)

80% Cobble	20% Gravel	0% Sand	0% Silt	0% Mud/Clay	0% Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

Some benthic algae

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input type="checkbox"/> Scum	<input type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Carrie Smith Date: 10/21/04

Organization: MIZ WATER RESOURCES Position: ENVIRONMENTAL SPECIALIST

MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD-VAA

Date/Time: 10/21/04 16:05

Site/Transect ID Number: T21

Start Time: 16:05

End Time: 16:20

Measured by: NM/LL

Air Temp: 60°F

Weather Cond: Cloudy

Stream Morphology Between Transects

Point GPS - 185

Point GPS - 17-20

17-20 Length of Pools				Length of Run				Length of Riffles		
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Stream Morphology At Transect

LDB Angle: _____

RDB Angle: _____

Secchi (ft) _____

Turbidity (NTU): _____

Channel Comp (%):

Cobble 20

Gravel 80

Sand _____

Silt _____

Other _____

Bank Composition _____

Riparian Corridor Density: _____

Width of Riparian Area: _____

Composition of Riparian Vegetation: _____

General Observations: _____

Stream Discharge Measurements

Beginning Stage: _____

Ending Stage: _____

Total Q: _____

Channel Width: _____

Total Area: _____

Average Velocity: _____

Distance from Datum to Water Surface: _____

Start: _____

End: _____

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #:

[illegible]

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: <u>1710</u>	Site Location Description:	
Site Lat/Long: <u>0738520 / 4268732</u>	<u>River Des Peres - 22</u>	
Date & Time: <u>10/21/24 16:20</u>	Facility Name:	
Personnel: <u>NM/CL</u>	Permit Number:	
Current Weather Conditions: <u>Cloudy</u>	Weather Conditions for Past 7 days: <u>Cloudy</u>	
Photo Ids: Upstream:	Downstream:	Other: <u>0116 - 0122</u>

Used Observed*:

<input type="checkbox"/> Swimming	<input type="checkbox"/> Skin Diving	<input type="checkbox"/> SCUBA diving	<input type="checkbox"/> Tubing	<input type="checkbox"/> Water Skiing
<input type="checkbox"/> Wind surfing	<input type="checkbox"/> Kayaking	<input type="checkbox"/> Boating	<input type="checkbox"/> Wading	<input type="checkbox"/> Rafting
<input type="checkbox"/> Hunting	<input type="checkbox"/> Trapping	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> None of the above	<input type="checkbox"/> Other

Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)

Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)

<input type="checkbox"/> City/county parks	<input type="checkbox"/> Playgrounds	<input type="checkbox"/> MDC conservation lands	<input checked="" type="checkbox"/> Urban areas	<input type="checkbox"/> Campgrounds
<input type="checkbox"/> Boating accesses	<input type="checkbox"/> State parks	<input type="checkbox"/> National forests	<input type="checkbox"/> Nature trails	<input type="checkbox"/> Stairs/walkway
<input type="checkbox"/> No trespass sign	<input checked="" type="checkbox"/> Fence	<input checked="" type="checkbox"/> Steep slopes	<input type="checkbox"/> Other:	

Evidence of Human Use*:

<input type="checkbox"/> Roads	<input type="checkbox"/> Foot paths/prints	<input type="checkbox"/> Dock/platform	<input type="checkbox"/> Livestock Watering	<input type="checkbox"/> RV/ATV Tracks
<input type="checkbox"/> Rope swings	<input type="checkbox"/> Camping Sites	<input type="checkbox"/> Fire pit/ring	<input type="checkbox"/> NPDES Discharge	<input type="checkbox"/> Fishing Tackle
<input type="checkbox"/> Other:				

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

*Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two – Data Sheet B for WBID #:

Stream Morphology:

Upstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes	No	Estimated (ft ³ /sec):

Downstream View Physical Dimensions:

<input type="checkbox"/> Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max. Depth(ft)
<input type="checkbox"/> Flow	Present?	Yes	No	Estimated (ft ³ /sec):

Substrate*: (These values should add up to 100%)

<u>75</u> %Cobble	<u>5</u> %Gravel	<u>—</u> %Sand	<u>—</u> %Silt	<u>—</u> %Mud/Clay	<u>—</u> %Bedrock
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Aquatic Vegetation*: (note amount of vegetation or algal growth at the assessment site)

<u>Some benthic algae</u>

Water Characteristics*: (Mark all that apply.)

Odor:	<input type="checkbox"/> Sewage	<input type="checkbox"/> Musky	<input type="checkbox"/> Chemical	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Color:	<input checked="" type="checkbox"/> Clear	<input checked="" type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Milky	<input type="checkbox"/> Other
Bottom Deposit:	<input type="checkbox"/> Sludge	<input type="checkbox"/> Solids	<input type="checkbox"/> Fine sediments	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other
Surface Deposit:	<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Scum	<input checked="" type="checkbox"/> Foam	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Other

Comments: Please attach additional comments (including information from interviews) to this form.

*This information is not to be used solely for removal of whole body contact recreation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that effect another use.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

Signed: Cassidy Zuehlke Date: 10/21/09

Organization: MFC WATER RESOURCES Position: ENVIRONMENTAL SPECIALIST

Appendix A River des Peres Site Photographs

Site #22. Upstream View



Site #22. Downstream View



MEC Water Resources

Stream Morphology & Discharge Measurements

Project Name/Number: MSD - VAA

Date/Time: 10/21/24

Site/Transect ID Number: 22

Start Time: 1620

End Time: 1630

Measured by: NM/LL

Air Temp: 59°F

Weather Cond: Cloudy

Stream Morphology Between Transects

GPS - 186

0.03 - 116 - 122

Length of Pools				Length of Run				Length of Riffles			
#	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	Start GPS #	End GPS #	ft.	End GPS #
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											

Stream Morphology At Transect

LDB Angle: _____

RDB Angle: _____

Secchi (ft) _____

Turbidity (NTU): _____

Channel Comp (%):

Cobble 75

Gravel 5

Sand _____

Silt _____

Other _____

Bank Composition Mud, Concrete, Rock

Riparian Corridor Density: _____

Width of Riparian Area: _____

Composition of Riparian Vegetation: _____

General Observations: End of Access Area - Train Bridge
- Drop off ~ 10' at bridge

Stream Discharge Measurements

Beginning Stage: _____

Ending Stage: _____

Total Q: _____

Channel Width: _____

Total Area: _____

Average Velocity: _____

Distance from Datum to Water Surface: _____

Start: _____

End: _____

Meas. type: Price AA Pygmy

Data Coll. Type: Aqua Calc Sheet

Aqua Calc Transect #: _____

[illegible]

Aqua Calc Discharge:

Remarks: